

WHAT IS CLAIMED IS:

1. An apparatus for optical inspection of liquid solutions and for identifying extraneous materials in such solutions, said apparatus comprising:

an inspection station having at least one optical inspection means for optically inspecting containers of liquid solution in said inspection station;

an indexable fixture for securely gripping at least one container of the liquid solution;

means for selectively moving the indexable fixture into the inspection station;

and

a vibrator for vibrating the container in the inspection station sufficiently to move extraneous material in the liquid solution, thereby facilitating optical inspections to identify the extraneous material.

2. The apparatus of claim 1, wherein the inspection station comprises a light source for illuminating the container.

3. The apparatus of claim 2, wherein the light source comprises a colored filter for enhancing visibility of extraneous matter in the solution.

4. The apparatus of claim 2, further comprising a video camera and a video monitor for generating an optical image of the containers of the liquid solution in the inspection station.



5. An apparatus for optical inspection of liquid solutions and for identifying extraneous materials in such solutions, said apparatus comprising:

an inspection station having at least one light source;

an indexable fixture for securely gripping at least one container of the liquid solution;

a vibrator for vibrating the fixture sufficiently to move extraneous material in the liquid solution in the container; and

means for selectively moving the indexable fixture into the inspection station and into alignment with the light source, thereby enabling visual inspections to identify the extraneous material moving in the liquid solution illuminated by the light source.

6. An inspection method comprising:

providing a plurality of substantially transparent containers, each said container having a liquid solution therein;

placing the containers in a selected orientation in a fixture;

vibrating the fixture sufficiently to cause any extraneous material in the liquid solution to move;

terminating the vibrating of the fixture;

illuminating the containers in the fixture;

identifying containers having extraneous material suspended in the liquid solution; and

separating any of the containers that are identified to have the extraneous material therein.

7. The method of claim 6, further comprising providing a video camera at the inspection station and producing a viewable image of the respective containers passing into the inspection station.

8. The method of claim 6, wherein the step of vibrating the fixture is carried out to maintain the container in the selected orientation in the fixture.

9. The method of claim 8, further comprising the step of sequentially indexing the fixture to an inspection station.